

Remarks

Claims 6, 12, and 15-17 are pending in this application. Claims 1-5, 13-14, and 18-20 have been cancelled. Claims 6, 12, and 15-17 now stand rejected. Claims 6, 12, and 15-17 have been amended. Claims 21-25 have been added. The specification has been amended to recite that the opposing end 50 of the palate member 44 has a downward extending portion and to recite the anchoring mechanism of the tongue member. Both of these are clearly shown in Figs. 4 and 5 and the same anchoring mechanism is described for the palate member on page 10, lines 24-27, accordingly there is no new matter being added.

Applicant has submitted herewith declarations from the inventor, Harold E. Cutler, and Dr. Ira L. Shapira providing further evidence of non-obviousness in addition to the reasons below.

Claim Rejections – 35 U.S.C. § 103

Claims 6, 12, and 15-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pivovarov (2004/021143) in view of Pivovarov (6,675,804).

Claim 6 has been amended to recite that the palate member is adjustably affixed to the tube member and has an upwardly inclined portion and ends in a downward extending portion. The palate member is adjusted in position to cause the downward extending portion to maintain contact with the soft palate of the wearer.

Pivovarov ‘430 does not teach a palate member with a downwardly extending portion that maintains contact with the soft palate. In the “Response to Arguments” section of the Office Action dated January 11, 2010, the Examiner stated the declining angle of structure 12A taught the “declined portion” as then claimed. Applicant has amended claim 6 to more explicitly recite that the end portion of the palate member extends downward, not just a declining angle. This downward extension allows the claimed invention to follow the shape

of the soft palate, something that Pivovarov is not concerned with at all. As shown in the figures below, the soft palate is located at the rear of the oral cavity, beyond the teeth. Pivovarov teaches a tongue receiving structure that does not reach anywhere near the soft palate, as depicted in Fig. 9 of ‘430.

Furthermore, Pivovarov does not teach an adjustably affixed palate member in either ‘430 or ‘804. Examiner points to the undulating sine wave shaped connector 16 in ‘804, which is resilient and allows for some freedom of movement for comfort and adjustability. Claim 6, as amended, recites that the tube member is adjustably *affixed*, however, meaning that once placed in position it does not move. This is because the adjustability is not for comfort, but to ensure that the palate member is in contact with the soft palate. As already described, Pivovarov does not teach that his tongue receptacle could possibly contact the soft palate, and the connector 16 would not allow the receptacle to stay in contact with the soft palate even if it did.

Claim 12 has been amended in a similar way to claim 6, regarding the soft palate member, and further to recite that the tongue member is adjustably affixed to the tube member and ends in a portion that is angled downward and extends downward to follow the shape of the back of the tongue. The tongue member is adjusted in position to maintain downward pressure on the tongue and reach a rear area of the tongue. It is also adjustable in position independent of the palate member.

The soft palate member is non-obvious for similar reasons as in claim 6, notably the downward extending portion, contacting the soft palate, and being adjustably affixed in position to maintain pressure on the soft palate. Pivovarov also does not teach the tongue member of claim 12. Pivovarov teaches a tongue receiving structure 12B, which is integral with the “soft palate” portion 12A, that has a concave-up shape in order to contain the front of the tongue. Pivovarov therefore does not teach a tongue member that ends in a portion that is angled downward, extends downward, and follows the shape of the **back** of the tongue (which is concave-down, as shown in the figures below). Similar to the soft palate member, the tongue member is adjustably affixed to the tube member such that it maintains

downward pressure on the tongue and reaches a **rear** area of the tongue. Pivovarov does not teach an adjustably affixed tongue member, but one that has a fairly constant length with some movement allowed for comfort (as described above with respect to the soft palate member). He also does not teach that the tongue receptacle 12B reaches a rear area of the tongue, as clearly shown in Fig. 9 of '430. Pivovarov's 12B is designed to go underneath the tip of the tongue, and could in no way contact the rear area of the tongue as shown in the figures below.

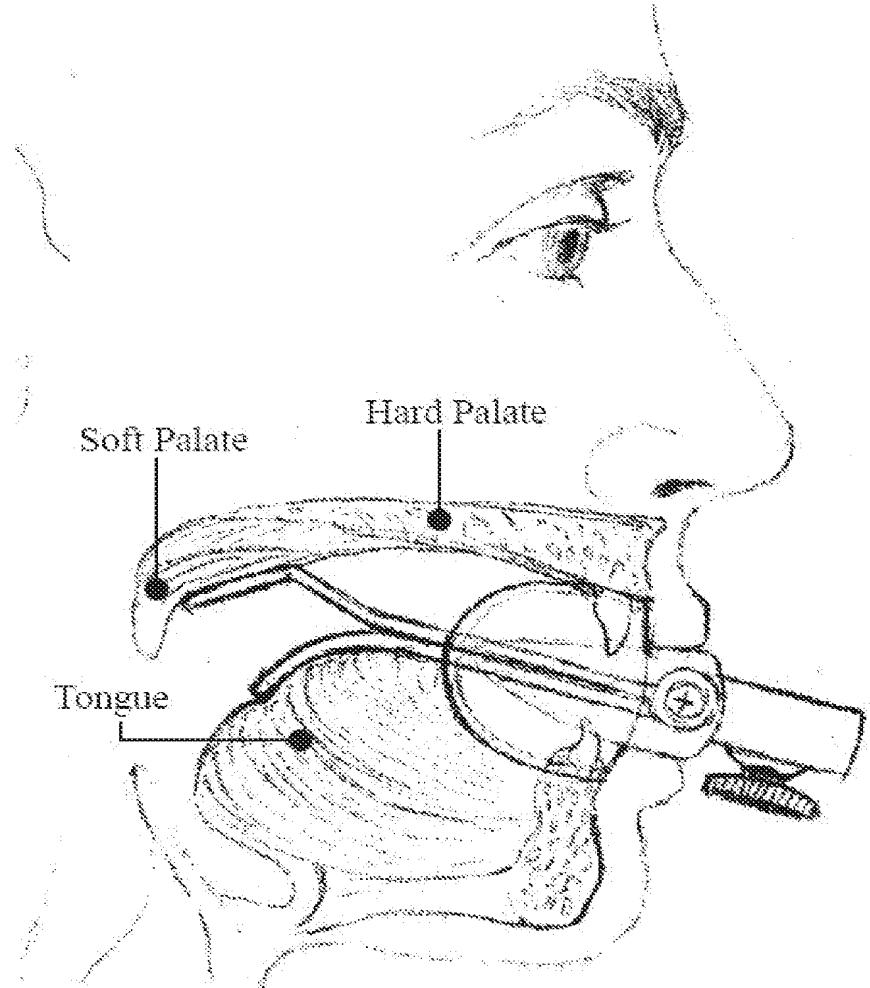
Furthermore, Claim 12 recites that the soft palate member and tongue member are adjustably affixed independently of each other, which is not taught by Pivovarov. Examiner states that 12A and 12B could be adjusted independently, however they are one integral piece 12 and the compression and/or extension of the connector 16 would affect both in the same way. There is absolutely no indication that two separate connectors would be used in Pivovarov, since 12A and 12B are a single piece. Even if two separate connectors were used, they still would not adjustably *affix* the elements in the right position to contact the soft palate and rear tongue area as they merely have a constant size with some ability to shorten or lengthen for comfort and are not fixed in place, as required by claim 12.

Claims 15-17 and 21 are dependent from claims 6 and 12, and are therefore patentable for at least the same reasons as said claims. New claim 22 is dependent from claim 12 and recites that the tongue member is configured to inhibit rearward movement of the tongue. By extending downward, following the shape of the tongue, and maintaining pressure on the tongue, the tongue member is able to inhibit rearward movement of the tongue and keep the airway open. Pivovarov teaches a tongue receiving structure that prevents forward movement of the tongue and, if anything, forces the tongue backward to obstruct the airway.

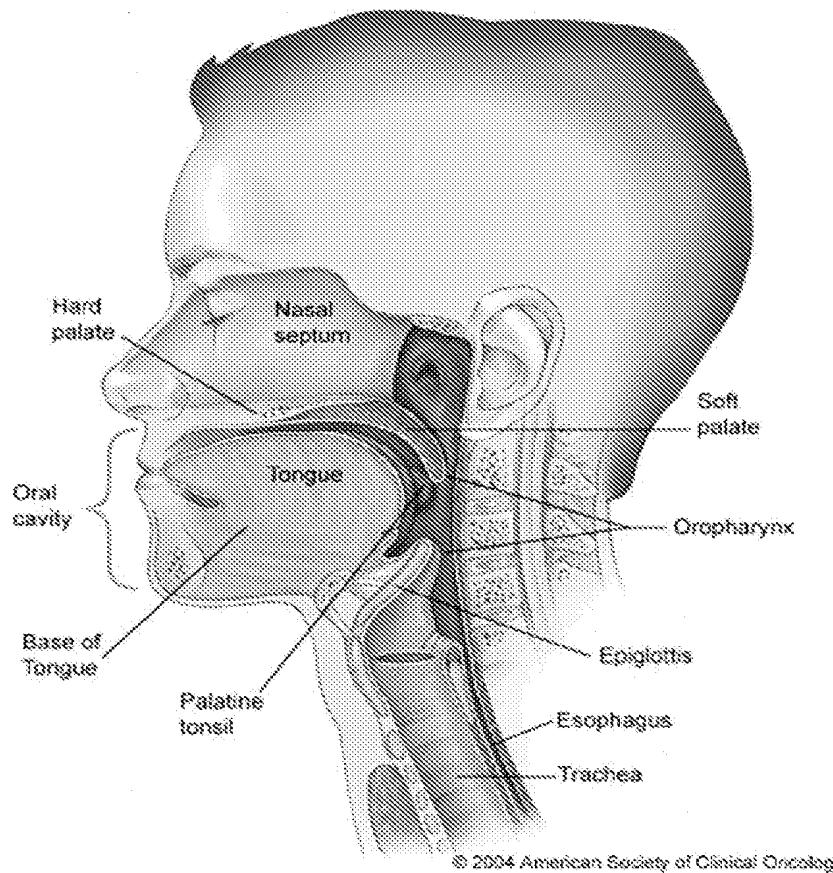
New claim 23 is similar to claim 12, but further recite that the soft palate member and tongue member include slots therein to adjust their positions. The slot cooperates with a screw to attach the member to the tube portion in order to make the member contact the desired area. These limitations are completely absent from the cited art and would

not be obvious because Pivovarov teaches a connector 16 that does not adjust its fixed position at all, let alone via a slot and screw mechanism. Claims 24 and 25 are dependent from claim 23 and are therefore patentable for at least the same reasons as claim 23. In addition, claim 24 recites that the soft palate portion further comprises a substantially horizontal portion between the upwardly inclined portion and the downward extending portion. Pivovarov is completely silent on this limitation and only teaches a tongue receiving structure that is totally curved.

Accordingly, Applicant respectfully submits that claims 6, 12, 15-16, and 21-25 are patentable over Pivovarov '430 and '804 and request the withdrawal of the rejection under 35 U.S.C 103(a) to said claims.



Schematic drawing of an embodiment of the present invention showing the location of the soft palate and the device's contact with the soft palate and back of tongue.



Schematic of the anatomy of the oral cavity showing the location of the hard and soft palates as well as the areas of the tongue.

Claim 17 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Pivovarov (2004/021143) and Pivovarov (6,675,804) as applied to claim 12 above, and further in view of Jackson (5,174,284). Claim 17 is ultimately dependent from claim 12 and is therefore patentable for at least the same reasons as above. Accordingly, Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. to claim 17.

Conclusion

Applicants have made a genuine effort to respond to each of the Examiner's objections and rejections in advancing the prosecution of this case. Applicants believe that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If any additional issues need to be resolved, the Examiner is invited to contact the undersigned at his earliest convenience.

The Petition fee of \$245.00 is being charged to Deposit Account No. 02-3978 via electronic authorization submitted concurrently herewith. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to Deposit Account No. 02-3978.

Respectfully submitted,

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